

## ABSTRACT

The invention relates to a differential pressure means (4) and a gas meter arrangement (1) for precisely measuring a gas consumption (6a) by means of a gas meter (2). A previously known gas meter (2) is disposed in a bypass (3) comprising a differential pressure means (4) in the gas pipe (5) for measuring a volumetric flow rate ( $dV/dt$ , 6a) inside the gas pipe (5). According to the invention, the differential pressure means (4) comprises flow ducts (40) having decreasing diameters ( $D_1 > D_2 > D_3 > D_4$ ) as the radial position ( $R_1 < R_2 < R_3$ ) increases starting from a central axis (A) of the differential pressure means (4). Examples of execution include inlet ports (41) and/or outlet ports (42) of the flow ducts (40) which are provided with a specific countersink angle ( $\alpha$ ), and an equidistant, concentric arrangement of flow ducts (40) on the cross-sectional area (Q) of the differential pressure means (4). The invention has the advantage of increasing the differential pressure (4) at a low volume flow rate ( $dV/dt$ , 6a), reducing the differential pressure (4) at a high volume flow rate ( $dV/dt$ , 6a), and generally creating an improved linearity across the entire measurement range between the volume flow rate (6b) in the bypass (3) and the volume flow rate ( $dV/dt$ , 6a) in the gas pipe (5), among other things.

(Figs. 3a, 3b)